

WHAT IS CLAIMED IS:

1. A method of generating a simulated microarray image, the method comprising:

receiving a plurality of simulation parameters; and

generating the simulated microarray image based at least on the simulation parameters.

2. A computer-readable medium comprising computer-executable instructions for performing the method of claim 1.

3. A method comprising:

generating a simulated microarray image based on simulation parameters, wherein the simulated microarray image is associated with known values; and

analyzing the simulated microarray image via a microarray imaging procedure, the analyzing comprising calculating observed values.

4. A computer-readable medium having computer-executable instructions for performing the method of claim 3.

5. The method of claim 3 further comprising:

comparing the known values with the observed values to benchmark the microarray imaging procedure.

6. The method of claim 7 further comprising:

generating a rating based on results of the comparing, wherein the rating indicates effectiveness of the microarray imaging procedure.

7. The method of claim 3 wherein the values comprise spot intensity values.

8. The method of claim 3 wherein the generating comprises simulating a fluorescent background level for the simulated microarray image.

9. The method of claim 3 wherein the generating comprises simulating spots for the simulated microarray image.

5 10. The method of claim 3 wherein the generating comprises simulating post-processing phenomena for the simulated microarray image.

11. A method for simulating a microarray, comprising:
defining a plurality of parameters;
10 generating a microarray according to the parameters using an imaging procedure;
comparing the microarray to a known value; and
evaluating the imaging procedure in response to the comparison.

15 12. A computer-readable medium having computer-executable instructions for performing the method of claim 11.